

$$\begin{aligned}\delta(nab) &= -n((X') b \cos T + (Y') a \sin T), \\ \frac{1}{2}\delta(n^2(a^2 + b^2)) &= -n^2((X') a \cos T + (Y') b \sin T) + r^2nn', \\ (a^2 - b^2)(\delta\phi + \cos l \delta\psi) &= -((X') b \sin T + (Y') a \cos T) + 2a b \sin T \cos T \frac{n'}{n}, \\ (a^2 - b^2) \delta(nt + \rho) &= (X') a \sin T + (Y') b \cos T - (a^2 + b^2) \sin T \cos T \frac{n'}{n};\end{aligned}$$

in which $\frac{d\xi}{dt}$ and $\frac{d\eta}{dt}$ are the differential coefficients of the expressions for ξ and η , taken explicitly with regard to t .

This method is denominated the method of Osculating Variation.

II. "Description of some Remains of a Gigantic Land-Lizard (*Megalanía prisca*, Ow.) from Australia." By Prof. RICHARD OWEN, F.R.S. Received May 13, 1858.

(Abstract.)

The subject of this communication forms part of a collection of fossil remains from Australia, recently acquired by the British Museum, and demonstrates the former existence in that continent of a land-lizard considerably surpassing in bulk the largest species now known. The characters are chiefly derived from vertebræ, partially fossilized, equalling in size those of the largest existing Crocodiles; they are of the 'procelian' type, but present lacertian modifications, and closely agree with those in the great existing 'Lace-lizard' of Australia (*Hydrosaurus giganteus*, Gray), of which individuals upwards of six feet long have been taken. A generic or sub-generic distinction is indicated by the comparatively contracted area of the neural canal, and by the inferior development of the neural spine, of the fossil vertebræ, which have belonged to an individual not less than twenty feet in length, calculated from the vertebræ and proportions of the body of the existing *Hydrosauri*. For this, probably extinct lizard, the name of *Megalanía prisca* is proposed.

The results of an extended series of comparisons of its vertebræ with those of recent and extinct Sauria are given; and the paper is illustrated by drawings of the vertebræ of *Megalanía* and those of *Hydrosaurus*.